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European Standard (Telecommunications series)

Private Integrated Services Network (PISN); Specification, functional models and information flows; Control aspects of circuit-mode basic services

[ISO/IEC 11574 (1994) modified]



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Foreword

This European Standard (EN) has been produced by ECMA on behalf of its members and those of the European Telecommunications Standards Institute (ETSI).

The present document is one of a series of standards defining services and signalling protocols applicable to Private Integrated Services Networks (PISN). The series uses the Integrated Services Digital Network (ISDN) concepts as developed by ITU-T and conforms to the framework of standards for Open Systems Interconnection (OSI) as defined by ISO/IEC.

The present document contains specifications of basic services.

The previous (first) edition of the present document contained a "standalone" specification of the basic services. This edition endorses an International Standard, ISO/IEC 11574 and an amendment to that International Standard, published since the publication of the first edition of the present document.

National transposition dates	
Date of adoption of this EN	5 September 1997
Date of latest announcement of this EN (doa):	31 December 1997
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 June 1998
Date of withdrawal of any conflicting National Standard (dow):	30 June 1998

Endorsement notice

The text of International Standard ISO/IEC 11574 (1994), together with Amendment 1 (1997) to that text, was approved by ETSI as an EN with agreed modifications as given below.

NOTE: New or modified text is indicated using sidebars. In addition, underlining and/or strike-out are used to highlight detailed modifications where necessary.

Clause 2

Replace the first paragraph by:

The present document incorporates by dated and undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to the present document only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

Insert the following new subclause at the end of clause 2:

2.3 European Standards

- [15] ETS 300 189 (1992): "Private Telecommunication Network (PTN); Addressing".
- [16] ETS 300 387 (1994): "Private Telecommunication Network (PTN); Method for the specification of basic and supplementary services".
- [17] ETS 300 475-1 (1995): "Private Integrated Services Network (PISN); Reference configuration - Part 1: Reference configuration for PISN eXchanges (PINXs)".

Throughout the text of ISO/IEC 11574

Throughout the text of ISO/IEC 11574, replace references as shown in the table below:

Reference in ISO/IEC 11574	Modified reference
ITU-T Recommendation I.130	ETS 300 387 [16]
ISO/IEC 11571	ETS 300 189 [15]
ISO/IEC 11579-1	ETS 300 475-1 [17]

Throughout the text of ISO/IEC 11574

Throughout the text of ISO/IEC 11574, replace the term "International Standard" by "EN".

Subclause 5.2

Replace the last paragraph (beginning "Annex B provides ...") with:

"Annex B provides guidelines for, and additional information about, teleservices."

Annex B

Replace the existing annex B (normative) "Telephony teleservice" with the following annex B (normative):

Annex B (normative): Teleservices

B.1 General

A PISN can support teleservices requiring the same bearer capabilities as the bearer services specified in the present document. These teleservices include, for example:

- Telephony 3,1 kHz teleservice;
- Telefax group 4 teleservice; and
- Circuit-mode syntax-based videotex teleservice.

The support by a PISN of one or more of these teleservices is optional. However, if a PISN supports one or more of these teleservices then it shall comply with this annex.

The bearer capabilities and other special requirements used to support these teleservices are specified below. Otherwise, the impact of these teleservices on the network is the same as for the corresponding bearer service.

The PISN shall convey an indication of the teleservice being used as High Layer Compatibility (HLC) information, from the calling PISN user to the called PISN user. Any use of this indication by the PISN is outside the scope of the present document.

A PISN may reject a request for a teleservice if the requested bearer capabilities are not those specified in this annex.

NOTE 1: Additional information can be found in the following ETSs:

ETS 300 111 (Telephony 3,1 kHz);

ETS 300 120 (Telefax group 4); and

ETS 300 262 (Circuit-mode syntax-based videotex).

NOTE 2: The support of other teleservices is not precluded. ETR 018 and ETR 076 contain guidance regarding other teleservices that can be supported using the bearer capabilities defined by the present document.

High layer functions for interworking between these teleservices and non-ISDN networks are beyond the scope of the present document.

B.2 Telephony 3,1 kHz teleservice

When this teleservice is required, the bearer capability requested shall comply with the low layer attributes specified in table B.1 below.

Table B.1: Low layer attributes for telephony 3,1 kHz teleservice

<u>Low layer attribute</u>	<u>Attribute value</u>
1) <u>Information transfer mode:</u>	<u>circuit</u>
2) <u>Information transfer rate:</u>	<u>64 kbit/s</u>
3) <u>Information transfer capability:</u>	<u>speech (see note 1)</u>
4) <u>Structure:</u>	<u>8 kHz integrity</u>
5) <u>Establishment of communication:</u>	<u>demand</u>
6) <u>Symmetry:</u>	<u>bi-directional symmetric</u>
7) <u>Communication configuration:</u>	<u>point-to-point</u>
8) <u>Access channel (see note 2):</u>	<u>B</u>
9) <u>Access protocol (see note 2):</u>	<u>ITU-T Recommendation G.711 (A-law or μ-law).</u>
NOTE 1: <u>In interworking situations the information transfer capability can default to 3,1 kHz audio.</u>	
NOTE 2: <u>Attribute refers only to the user information and not to the signalling information.</u>	

B.3 Telefax group 4 teleservice

When this teleservice is required, the bearer capability requested shall comply with the low layer attributes specified in table B.2 below.

Table B.2: Low layer attributes for telefax group 4 teleservice

<u>Low layer attribute</u>	<u>Attribute value</u>
1) <u>Information transfer mode:</u>	<u>circuit</u>
2) <u>Information transfer rate:</u>	<u>64 kbit/s</u>
3) <u>Information transfer capability:</u>	<u>unrestricted</u>
4) <u>Structure:</u>	<u>unstructured (see note 1)</u>
5) <u>Establishment of communication:</u>	<u>demand</u>
6) <u>Symmetry:</u>	<u>bi-directional symmetric</u>
7) <u>Communication configuration:</u>	<u>point-to-point</u>
8) <u>Access channel (see note 2):</u>	<u>B</u>
9) <u>Access protocol (see note 2):</u>	<u>ISO/IEC 7776 and ISO/IEC 8208 (see note 3)</u>
NOTE 1: <u>Even if no structure is required, the network may provide 8 kHz integrity.</u>	
NOTE 2: <u>Attribute refers only to the user information and not to the signalling information.</u>	
NOTE 3: <u>The use of a packet-mode bearer capability to support this teleservice is outside the scope of this edition of the present document.</u>	

B.4 Circuit-mode syntax-based videotex teleservice

When this teleservice is required, the bearer capability requested shall comply with the low layer attributes specified in table B.3 below.

Table B.3: Low layer attributes for circuit-mode syntax-based videotex teleservice

<u>Low layer attribute</u>	<u>Attribute value</u>
1) <u>Information transfer mode:</u>	<u>circuit</u>
2) <u>Information transfer rate:</u>	<u>64 kbit/s</u>
3) <u>Information transfer capability:</u>	<u>unrestricted</u>
4) <u>Structure:</u>	<u>unstructured (see note 1)</u>
5) <u>Establishment of communication:</u>	<u>demand</u>
6) <u>Symmetry:</u>	<u>bi-directional symmetric</u>
7) <u>Communication configuration:</u>	<u>point-to-point</u>
8) <u>Access channel (see note 2):</u>	<u>B</u>
9) <u>Access protocol (see note 2):</u>	<u>ISO/IEC 7776 and ISO/IEC 8208 (see note 3)</u>
NOTE 1: Even if no structure is required, the network may provide 8 kHz integrity.	
NOTE 2: Attribute refers only to the user information and not to the signalling information.	
NOTE 3: The use of a packet-mode bearer capability to support this teleservice is outside the scope of this edition of the present document.	

Annex C

Add the following bibliographic references to annex C:

- [10] ETR 018 (1995): "Integrated Services Digital Network (ISDN); Application of the Bearer Capability (BC), High Layer Compatibility (HLC) and Low Layer Compatibility (LLC) information elements by terminals supporting ISDN services" 4th edition.
- [11] ETR 076 (1995): "Integrated Services Digital Network (ISDN); Standards guide" 3rd edition.
- [12] ETS 300 111 (1992): "Integrated Services Digital Network (ISDN); Telephony 3,1 kHz teleservice Service description".
- [13] ETS 300 120 (1992): "Integrated Services Digital Network (ISDN); Service requirements for telefax group 4".
- [14] ETS 300 262 (1993): "Integrated Services Digital Network (ISDN); Syntax-based Videotex teleservice Service description".

Add the following new annex ZD:

Annex ZD (informative): Corrections to ISO/IEC 11574

ZD.1 Introduction

This annex contains corrections to ISO/IEC 11574, proposed by ECMA to ISO/IEC JTC1 SC6/WG6. The majority of these changes are to correct minor editorial problems. However, there are some minor technical changes; these are indicated and a rationale is given.

ZD.2 Proposed changes

ZD2.1 Amendment to subclause 5.2

In the penultimate line of the second paragraph, insert the word "of" after the word "scope".

ZD2.2 Amendment to subclause 5.3, NOTE 10

Insert a full-stop (period) after the words "NOTE 10".

ZD2.3 Amendment to subclause 6.5.1

In the title of subclause 6.5.1, change the word "network" to "networks".

ZD2.4 Amendment to subclause 6.5.3

In the second paragraph, replace the words "a analogue network" by "an analogue network".

ZD2.5 Amendment to subclause 6.6

In the first line, change the word "attribute" to "attributes".

ZD2.6 Amendment to subclause 7.5.1

In the title of subclause 7.5.1, change the words "Digital Networks" to "digital networks".

ZD2.7 Amendment to subclause 7.6

In the first line, change the word "attribute" to "attributes".

ZD2.8 Amendment to subclause 8.1

In the second paragraph, insert the word "etc." after the words "speech processing devices".

ZD2.9 Amendment to subclause 8.1, NOTE 23

In NOTE 23, delete the word "International" and change the word "Standard" to "standard".

ZD2.10 Amendment to subclause 8.5.1

In the title of subclause 8.5.1, change the words "Digital Networks" to "digital networks".

ZD2.11 Amendment to subclause 8.6

In the first line, change the word "attribute" to "attributes".

ZD2.12 Amendments to subclause 9.2.1

Technical change: The existing text is incorrect for a number of reasons:

1. the text states is optional for the Network Call Control (NCC) entity to convey the items of information listed in the bullet points to the calling PISN user. In fact, it is optional for the called user to supply them; if supplied to the NCC entity, they must be conveyed to the calling PISN user;
2. HLC information would not be available in the backward direction at this point in call establishment unless HLC selection procedures were being used - the scope of the International Standard specifically states that the negotiation of service at call establishment time is outside the scope;
3. The sentence: "The called user may use the LLC and HLC information for compatibility checking." is out of context here, as the paragraph is dealing with behaviour at the calling side.

The changes proposed correct these three problems, as well as two editorial problems.

In the last paragraph of subclause 9.2.1, replace the text:

"The confirmation may optionally contain:

- _____ - the connected PISN user's subaddress;
- _____ - the Lower (sic) Layer Compatibilty (sic) information; and
- _____ - High Layer Compatibility information;

if they have been provided. The called user may use the LLC and HLC information for compatibility checking."

by:

"The confirmation shall contain:

- _____ - the connected PISN user's subaddress; and/or
- _____ - the Low Layer Compatibility information;

if either were contained in the SETUP response sent by the called PISN user."

and insert a paragraph break before the sentence beginning "For certain service categories".

ZD2.13 Amendment to subclause 9.2.2

Technical change: see subclause 9.2.1 above (rationale item 2).

In the last paragraph of subclause 9.2.2, replace the text ", low layer compatibility information and high layer compatibility information." by "and/or low layer compatibility information."

ZD2.14 Amendment to subclause 9.2.3

Technical change: The word "may" is incorrect, implying that the ability to release the call using RELEASE request is an implementation option. The word "can" would be more correct, implying that either PISN user has the ability to release the call and that if this ability is exercised then RELEASE request is used. Two sentences would be the best solution, however.

Replace the sentence beginning "The call may be released ..." by "The call can be released by either of the PISN users. A PISN user shall release a call by transferring a request for release (RELEASE request) across its service access point."

ZD2.15 Amendment to subclause 10.1.2, NOTE 37

In NOTE 37, insert the word "the" before the words "called user".

ZD2.16 Amendment to subclause 10.1.3

Replace the words "user, and when the call" by "user and the call".

ZD2.17 Amendment to subclause 10.1.3, NOTE 38

Insert commas before and after the words "for example".

ZD2.18 Amendment to subclause 10.2.1, item (a)

In item (a) of subclause 10.2.1, replace the word "PISN" by "public ISDN".

ZD2.19 Amendment to subclause 10.2.1, items (c) and (d)

In items (c) and (d) of subclause 10.2.1, replace "e.g" by "e.g.,".

ZD2.20 Amendment to subclause 10.2.3, item (a)

Rationale: The words appear to be superfluous.

In item (a) of subclause 10.2.3, delete the words "and optionally pass on if provided".

ZD2.21 Amendment to subclause 10.2.4

Replace the word "Report indication" by "REPORT indication".

ZD2.22 Amendment to subclause 12.2.2.4

Insert the word "the" before the words "access functional entity".

ZD2.23 Amendment to subclause 13.2, table 1

Technical change: The information content of SETUP response/confirmation incorrectly shows the inclusion of the Connection Type Service Element as "not applicable"; it should be shown as "optional".

In the response/confirmation column of table 1, in the row for CT Connection Type, replace "-", by "O".

ZD2.24 Amendments to subclause 13.2, table 2

In table 2, in the row for CT Connection Type:

- in the 1st column, the words "3,1 kHz audio" are incorrectly spaced;
- in the 2nd column, insert the words "Low layer compatibility - o" before the words "Information transfer mode";
- in the 3rd column, the words "Low layer compatibility - o" should all appear on the same line.

Technical change: In note 6, the word "only" appears to have been omitted, with the result that the meaning of the note is slightly different from that intended.

In note 6, insert the word "only" after the words "Call History Information, ".

ZD2.25 Amendment to subclause 13.6

Correct the spelling of the word "invite".

ZD2.26 Amendment to subclause 14.1.3

In item (c) of "Function 200", insert a space before each of the 2 left bracket characters, "(".

ZD2.27 Amendments to subclause 14.1.4

In subclause 14.1.4:

- in item (a) of "Function 310", delete the characters "ISO/IEC ";
- in item (a) of "Function 315", replace the space character after the word "INFORMATION" by an underline character, " ".

ZD2.28 Amendment to subclause 14.1.5

In item (b) of "Function 410", delete the characters "ISO/IEC ".

ZD2.29 Amendment to subclause 14.6

Rationale: The figure for outgoing interworking in subclause 14.7 has a note to explain what the content of the CH service element should be; there is no similar note for the incoming interworking case. Closer examination shows that the note needs to be more complex than the note already existing in subclause 14.7.

Replace the existing note after the figure with the following:

"NOTES -

1. CH (Call History) in the r2 SETUP request/indication information flows contains the service parameter: "Signalling interworking: non-common channel signalling system".

In the r3 SETUP request/indication information flow CH contains the service parameter: "Interworking encountered".
2. The RT (Report Type) in this sequence is "User being alerted".

ZD2.30 Amendment to subclause 14.7

Technical change: The use of the phrase "interworking with non-ISDN marker", is technically incorrect and thus confusing. The proper name of the stage 2 service parameter should be used here. Closer examination also reveals that the content of CH varies according to the relationship.

Replace NOTE 1 by the following:

1. CH (Call History) in the r2 REPORT request/indication information flows contains the service parameter: "Signalling interworking: non-common channel signalling system".

In the r1 REPORT request/indication information flow CH contains the service parameter: "Interworking encountered".

ZD2.31 Amendment to subclause 14.10

Technical change: Note 1 is wrong - see above.

Replace NOTE 1 by the following:

1. The CH (Call History) service element, if present, contains either the "Signalling interworking: non-common channel signalling system" service parameter, or the "Interworking encountered" service parameter.

ZD2.32 Amendment to subclause 14.11

Technical change: Note 1 is wrong - see above.

Replace note 1 by the following:

1. The CH (Call History) service element, if present, contains either the "Signalling interworking: non-common channel signalling system" service parameter, or the "Interworking encountered" service parameter.

History

Document history		
Edition 1	December 1992	Publication as ETS 300 171
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